SC2 OptiCam® Pre-Polished Fiber Optic Connectors

**Specifications**

SC2 pre-polished fiber optic connectors shall be TIA/EIA-604 FOCCS-3 compliant and contain a factory-terminated fiber, eliminating field polishing and adhesive. SC2 pre-polished connectors shall have an average insertion loss of 0.3dB per mated pair for multimode and singlemode fiber. SC2 pre-polished connectors shall capture fiber and buffer in one action allowing for up to two re-terminations with no degradation in performance.

**Technical Information**

- **Standards requirements:** TIA/EIA-604 FOCCS-3 compliant; exceeds TIA/EIA-568-D.3 requirements
- **Fiber compatibility:** 62.5/125µm OM1, 50/125µm OM2, 50/125µm OM3/OM4 and 9/125µm OS2
- **Fiber size and type:** 1.6mm - 2.0mm and 3.0mm jacketed cable with optional boots 900µm tight-buffered cable only
- **Ferrule type:** Zirconia ceramic
- **Insertion loss:** 0.3dB average (multimode and singlemode)
- **Return loss:** >20dB (multimode), >26dB (10Gig™ multimode), >50dB (singlemode)

**Key Features and Benefits**

**SC2 OptiCam® Connectors**

- **Factory pre-polished fiber stub endface**
  Eliminates inconsistent and time-consuming field polishing to deliver required optical performance; reduces termination time (less than half the time of field polish connectors) and the number of installation tools required
- **Dual cam design with fiber and buffer clamps**
  Secures both the fiber and the buffer during the camming step to facilitate consistent termination results; reduces the termination time compared to conventional termination methods
  Allows up to two re-terminations to achieve optimum termination results; reduces the number of rejected connectors and terminations to provide yield rates approaching 100% for lower installed costs
- **Translucent inner housing assembly**
  Facilitates inspection of the fiber termination quality; results in rapid installations, improved termination yields, and lower installed costs
- **Non-optical disconnect**
  Maintains data transmission under tensile loads for jacketed cable
- **Mechanical cable retention**
  Consistently provides higher than industry standard cable retention; requires no adhesive, speeding installation
- **OptiCam® 2 Termination Tool**
  The OptiCam® 2 Termination Tool is designed to offer certainty of terminations of OptiCam connectors
- **LCD Display**
  Guides the user through the termination process with simple step-by-step prompts and on-screen visuals. Indicates the field fiber and fiber stub are in proper alignment before camming
- **Calculated Insertion Loss**
  Provides calculated insertion loss value on completion of the camming process

**Applications**

SC2 fiber optic connectors are widely used in fiber optic backbone and horizontal applications for high-speed data transmission. Typical applications for SC2 OptiCam® Connectors include maintenance or emergency restoration of fiber networks and retrofit/initial install in both behind-the-wall (BTW) and in the permanent side of panelized interconnect and cross-connect.

SC2 OptiCam® Connectors eliminate the need for end face polishing and adhesive providing easier, faster installation, especially in remote areas and confined spaces. The hand-held OptiCam® 2 Termination Tool gives installers the flexibility to terminate in very close proximity to the application without having to switch tools or find benchtop space.

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**OptiCam® 2 Termination Tooling**

- **OptiCam® 2 Termination Kit:** FOCTT2-KIT
- **FOCTT2-BKIT**

**SC Fiber Optic Connectors**

- **SC Fiber Optic Adapters**
  - **Multimode:** FADSCAQ-L*
  - **Multimode:** FADSCEI-L
  - **Singlemode:** FADSCBU-L
  - **X = Bag of 10 Boots; 100 per carton.**

**Mini-Com® SC Adapter Modules**

- **Multimode:** CMDAQSC**
- **Multimode:** CMEISC**
- **Singlemode:** CMSBUVCZ**
  - **Substitute for module color: Ei = Electric Ivory, Bu = Blue, Bl = Black, Iw = Off White, Aw = Arctic White**

**Opticom® SC Fiber Adapter Panels**

- **3 duplex MM adapters:** FAP3WEIDSC
- **3 duplex SM adapters:** FAP3WBDSCZ
- **6 simplex MM adapters:** FAP6WEIDSC
- **6 simplex SM adapters:** FAP6WBDSCZ

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^Add -C to simplex connector part numbers for bulk packs of 100 connectors.

^Substitute for fiber type: 6 = 62.5/125µm OM1, 5 = 50/125µm OM2, X = 50/125µm OM3/OM4 or 9 = 9/125µm OS2.
performance information

<table>
<thead>
<tr>
<th>Test Parameter</th>
<th>Description</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualification test suite (TIA/EIA-568-D.3 requirements)</td>
<td>Complete testing protocol per TIA/EIA-568-D.3 using TIA/EIA FOTPs that include mechanical, environmental and optical test sequences</td>
<td>Exceeds TIA/EIA-568-D.3 requirements</td>
</tr>
<tr>
<td>Connector intermatability</td>
<td>Dimensional and material compliance to TIA/EIA standards</td>
<td>All connectors are FOCIS compatible with TIA/EIA-604-3</td>
</tr>
<tr>
<td>Repeated mating</td>
<td>500 mate/unmate cycles. Max. insertion loss: 0.75dB Min. return loss: 20dB</td>
<td>Exceeds TIA/EIA-568-D.3 test requirements: &lt;0.1dB additional insertion loss</td>
</tr>
<tr>
<td>Cable retention (straight pull): 900μm tight-buffered fiber</td>
<td>TIA/EIA-568-D.3 requirement: 0.5 lbs. load applied with &lt;0.5dB increase in insertion loss after test</td>
<td>Exceeds TIA/EIA-568-D.3 test requirements: 1.0 lbs. avg. load applied with &lt;0.2dB increase in insertion loss after test 11.24 lbs. load applied with &lt;0.1dB increase in insertion loss after test*</td>
</tr>
<tr>
<td>Jacketed cable</td>
<td>11.24 lbs. load applied with &lt;0.5dB increase in insertion loss after test</td>
<td></td>
</tr>
</tbody>
</table>

*Jacketed cable retention tensile load may vary based on specific manufacturer’s jacketed cable diameter and aramid yarn count.

selection information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Connector Type</th>
<th>Ferrule Material</th>
<th>Fiber</th>
<th>Ferrule Finish</th>
<th>Backbone Color</th>
<th>Boot/Housing Color</th>
<th>Average Insertion Loss**</th>
<th>Return Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSC2MCXAQ</td>
<td>Simplex</td>
<td>Zirconia</td>
<td>50/125μm OM3/OM4</td>
<td>SPC</td>
<td>Natural</td>
<td>Aqua/Black</td>
<td>0.3dB</td>
<td>&gt;26dB</td>
</tr>
<tr>
<td>FSC2DMCXAQ</td>
<td>Duplex</td>
<td>Zirconia</td>
<td>50/125μm OM2</td>
<td>SPC</td>
<td>Natural</td>
<td>Black/Black</td>
<td>0.3dB</td>
<td>&gt;20dB</td>
</tr>
<tr>
<td>FSC2MC5BL</td>
<td>Simplex</td>
<td>Zirconia</td>
<td>50/125μm OM1</td>
<td>SPC</td>
<td>Natural</td>
<td>Electric Ivory/Electric Ivory</td>
<td>0.3dB</td>
<td>&gt;20dB</td>
</tr>
<tr>
<td>FSC2DMC6EI</td>
<td>Duplex</td>
<td>Zirconia</td>
<td>62.5/125μm OM1</td>
<td>SPC</td>
<td>Natural</td>
<td>Electric Ivory/Electric Ivory</td>
<td>0.3dB</td>
<td>&gt;20dB</td>
</tr>
<tr>
<td>FSC2SCBU</td>
<td>Simplex</td>
<td>Zirconia</td>
<td>9/125μm OS2</td>
<td>UPC</td>
<td>Natural</td>
<td>Blue/Blue</td>
<td>0.3dB</td>
<td>&gt;50dB</td>
</tr>
</tbody>
</table>

*All connector insertion loss values calculated from tests taken with precision launch jumper assemblies per TIA/EIA-FOTP-171.

**Jacketed cable retention tensile load may vary based on specific manufacturer's jacketed cable diameter and aramid yarn count.

| FSC2MC***   | Simplex        | Zirconia        | 50/125μm OM3/OM4 | SPC          | Natural         | Aqua/Black         | 0.3dB                    | >26dB       |
| FSC2DMC***  | Duplex         | Zirconia        | 50/125μm OM2    | SPC          | Natural         | Black/Black        | 0.3dB                    | >20dB       |

***Substitute for fiber type: For multimode, insert XAQ for 50/125µm, 5BL for 50/125µm, or 6EI for 62.5/125µm.

Dimensions are in inches [Dimensions in brackets are in millimeters].

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